



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/083,675	02/26/2002	George G. Barclay	51063	9427

21874 7590 08/08/2003  
EDWARDS & ANGELL, LLP  
P.O. BOX 9169  
BOSTON, MA 02209

[REDACTED] EXAMINER

ASHTON, ROSEMARY E

[REDACTED] ART UNIT [REDACTED] PAPER NUMBER

1752

DATE MAILED: 08/08/2003

7

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/083,675	BARCLAY ET AL.	
	Examiner Rosemary E. Ashton	Art Unit 1752	
<i>-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --</i>			
<b>Period for Reply</b>			
<b>A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.</b>			
<ul style="list-style-type: none"> <li>- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.</li> <li>- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.</li> <li>- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.</li> <li>- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).</li> <li>- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).</li> </ul>			
<b>Status</b>			
1) <input checked="" type="checkbox"/> Responsive to communication(s) filed on <u>March 27, 2003</u> .			
2a) <input type="checkbox"/> This action is FINAL.		2b) <input checked="" type="checkbox"/> This action is non-final.	
3) <input type="checkbox"/> Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213.			
<b>Disposition of Claims</b>			
4) <input checked="" type="checkbox"/> Claim(s) <u>1-6,39-42,44,45,82-89 and 123</u> is/are pending in the application.			
4a) Of the above claim(s) _____ is/are withdrawn from consideration.			
5) <input type="checkbox"/> Claim(s) _____ is/are allowed.			
6) <input checked="" type="checkbox"/> Claim(s) <u>1,2,4,39,44,45,82,86-89 and 123</u> is/are rejected.			
7) <input checked="" type="checkbox"/> Claim(s) <u>3,5,6,40-42 and 83-85</u> is/are objected to.			
8) <input type="checkbox"/> Claim(s) _____ are subject to restriction and/or election requirement.			
<b>Application Papers</b>			
9) <input type="checkbox"/> The specification is objected to by the Examiner.			
10) <input type="checkbox"/> The drawing(s) filed on _____ is/are: a) <input type="checkbox"/> accepted or b) <input type="checkbox"/> objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).			
11) <input type="checkbox"/> The proposed drawing correction filed on _____ is: a) <input type="checkbox"/> approved b) <input type="checkbox"/> disapproved by the Examiner. If approved, corrected drawings are required in reply to this Office action.			
12) <input type="checkbox"/> The oath or declaration is objected to by the Examiner.			
<b>Priority under 35 U.S.C. §§ 119 and 120</b>			
13) <input type="checkbox"/> Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).			
a) <input type="checkbox"/> All    b) <input type="checkbox"/> Some * c) <input type="checkbox"/> None of: 1. <input type="checkbox"/> Certified copies of the priority documents have been received. 2. <input type="checkbox"/> Certified copies of the priority documents have been received in Application No. _____. 3. <input type="checkbox"/> Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received.			
14) <input checked="" type="checkbox"/> Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application). a) <input type="checkbox"/> The translation of the foreign language provisional application has been received.			
15) <input type="checkbox"/> Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.			
<b>Attachment(s)</b>			
1) <input type="checkbox"/> Notice of References Cited (PTO-892)		4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____	
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)		5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)	
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>5</u>		6) <input type="checkbox"/> Other: _____	

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1,2,4,39,44,45,82,86-89,123 rejected under 35 U.S.C. 102(b) as being anticipated by Hosaka et al U.S. patent no. 4,384,037 cited on applicant's IDS.

Hosaka teaches a method of making a photoresist composition comprising a polymer and a naphthoquinone diazide photoacid generator wherein the polymer is made adding a high reactivity monomer during the substantial portion of the polymerization (col. 5, lines 11-50). As shown in example 8 the monomers BD (1,3-butadiene) and MAA (methacrylic acid) are added continuously to the reaction/polymerization mixture.

After formation of the polymer the resist composition is made comprising 2,4-dihydroxybenzophenone 1,2-naphthoquinonediazide-5-sulfonate and solvent. It is coated on a silicon wafer, exposed and developed (col. 11, lines 25-42). Thus Hosaka teaches a polymer, a photoresist composition, a method of making and using a photoresist composition wherein the polymer in the composition is formed by adding over the substantial portion of the polymerization reaction at least one of the polymerization reagents as claimed in the instant application. From the teaching in col. 5, lines 11-50 the reagents BD and MAA are the monomers having the higher reactivity relative to the other monomers in the polymerization reaction mixture as in claims 2 and 45.

3. Claim 88 is rejected under 35 U.S.C. 102(b) as being anticipated by Hirayama et al U.S. patent no. 6,028,123 cited on applicant's IDS.

Art Unit: 1752

In synthetic example 1 Hirayama teaches a polymer prepared by reacting monomers wherein the polymerization initiator is continuously added dropwise over the substantial course of the polymerization reaction.

**Allowable Subject Matter**

4. Claims 3,5,6,40-42,83-85 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. The following is a statement of reasons for the indication of allowable subject matter: The prior art does not teach adding a reagent with the second fastest reaction rate over the substantial course of the polymerization reaction, a maleic anhydride or acrylate monomer, or exposure at less than 300 nm, less than 200 nm or at 193 nm.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rosemary E. Ashton whose telephone number is 703-308-2057. The examiner works a flexible work schedule and can normally be reached M-F between 10:00 am – 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janet Baxter can be reached at 703-308-2303.

The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communication.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



Rosemary E. Ashton  
Primary Examiner  
Art Unit 1752

rea

August 6, 2003

**ROSEMARY ASHTON  
PRIMARY EXAMINER**